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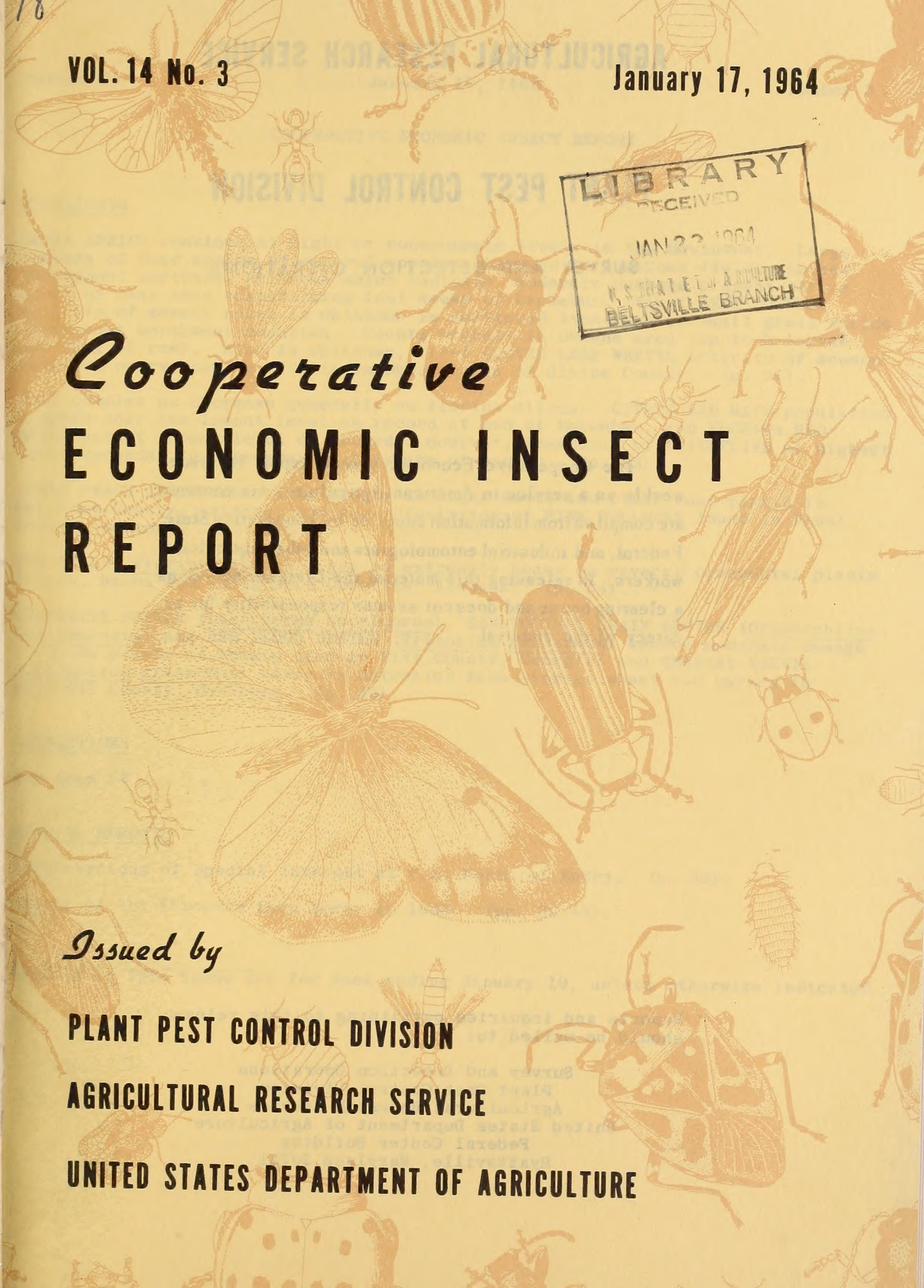

VOL. 14 No. 3

January 17, 1964

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Cooperative
ECONOMIC INSECT REPORT

Issued by

PLANT PEST CONTROL DIVISION

AGRICULTURAL RESEARCH SERVICE

UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

PLANT PEST CONTROL DIVISION

SURVEY AND DETECTION OPERATIONS

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Division serves as a clearing house and does not assume responsibility for accuracy of the material.

Reports and inquiries pertaining to this release should be mailed to:

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Hyattsville, Maryland 20781

Volume 14 January 17, 1964 Number 3

COOPERATIVE ECONOMIC INSECT REPORT

HIGHLIGHTS

GRAIN APHIDS continue at light or noneconomic levels in the Southwest. Large numbers of dead aphids of several species observed in numerous fields checked throughout northwest Oklahoma which indicate moderate numbers present before onset of near zero temperatures last weeks of December. First ARMY CUTWORM activity of season noted in Oklahoma in scattered locations in small grain fields throughout northwest counties. Counts highest in Okeene area (up to 3 larvae per foot of row). Also in Oklahoma, first CLOVER LEAF WEEVIL activity of season noted on overwintering alfalfa in Okeene area of Blaine County. (p. 31).

Pest complex on decrease generally on Florida citrus. CITRUS RED MITE population dropped near the lowest level on record at end of December, and FLORIDA RED SCALE was at lowest level on record. However, immatures of WHITEFLIES at highest level recorded for December in 12 years of record. (p. 32).

GREEN PEACH APHID increasing slowly in sugar beets and other host plants in Maricopa County, Arizona, and new infestation of PINK BOLLWORM found in Pinal County, Arizona. (p. 33).

TEA SCALE (*Fiorinia theae*) light to extremely heavy on several ornamental plants in Lee, Macon and Montgomery Counties, Alabama. (p. 34).

CIGARETTE BEETLE (*Lasioderma serricorne*), SAW-TOOTHED GRAIN BEETLE (*Oryzaephilus surinamensis*) and RED FLOUR BEETLE (*Tribolium castaneum*) caused moderate damage to 2,000 pounds of tomato seed in Tift County, Georgia; and GRANARY WEEVIL (*Sitophilus granarius*) heavy in untreated farm storage wheat and barley in Marshall County, Oklahoma. (p. 35).

CORRECTIONS

See page 36

SPECIAL REPORTS

Interceptions of Special Interest at U.S. Ports of Entry. (p. 38).

Status of the European Corn Borer in 1963. (pp. 39-46).

Reports in this issue are for week ending January 10, unless otherwise indicated.

WEATHER OF THE WEEK ENDING JANUARY 13

Fair weather prevailed over most of the East and West at the beginning of the week. It was cloudy over the Ohio and Mississippi River Valleys. Snow fell over the Great Lakes region and rain or snow in the Far Northwest. A cold front extended from the Great Lakes southwestward to Texas. As the front moved eastward, it produced rain over the eastern third of the Nation.

A second front moved into the Northwest early in the week and by Wednesday extended from Huron, South Dakota, southward to Concordia, Kansas, and southwestward to El Paso, Texas. This storm produced precipitation from the western Great Plains to the Great Lakes in the north and to the Atlantic Ocean in the south. Snow fell from the Rocky Mountains to the Great Lakes, and the Weather Bureau warned travelers of the hazardous driving conditions where snow and freezing rains slicked the highways.

Arctic air from Canada spread across the Nation during the last half of the week. Temperatures dropped to below zero over much of the Great Basin, the Rocky Mountains, and the northern and central Great Plains. By the weekend, a deepening storm brought extensive rains to the Southeast and snow from the western Great Plains eastward to New England. Snowfall ranged from a few inches along the western edge of the Great Plains to a foot or more in Illinois and eastward. Blizzard conditions prevailed in some areas. Strong winds piled the snow in drifts several feet deep. Highways became clogged and traffic halted. In Indiana, several hundred motorists became marooned between Kentland and Lafayette and sought shelter at farm homes and in villages. Many schools in the Northeast were closed for a day or more because of the storm.

Temperatures averaged below normal over most of the Nation. The main exceptions were in the Far Northwest, over parts of the upper Mississippi River Valley, and along the Atlantic coast from Florida to southern New England. Temperature departures ranged from +8° in central Washington to -12° over parts of the Great Basin. Over much of the Nation, temperatures averaged near normal at the beginning of the week, slightly below normal at midweek, and much below normal at the end of the period. Subzero temperatures occurred over the North Central States on several mornings during the latter half of the week.

Precipitation ranged from 1 to 3 inches along the Washington, Oregon, and northern California coast and from 2 to 5 inches over wide areas in the Southeastern States. Elsewhere, totals were generally less than 1 inch. Heavy snow fell over the northern Rocky Mountains and from Minnesota to Missouri and eastward to the Atlantic. Light snow fell in the mountains of New Mexico, over the western Great Plains, and across the Southland. A few flurries fell at Pensacola, Florida, on the 13th. (Summary supplied by U.S. Weather Bureau).

CEREAL AND FORAGE INSECTS

SPOTTED ALFALFA APHID (Therioaphis maculata) - OKLAHOMA - Small numbers found on overwintering alfalfa in one location in Garfield County. (Okla. Coop. Sur.). FLORIDA - Light in Hairy Peruvian alfalfa at Gainesville, Alachua County. (Mead).

PEA APHID (Acyrthosiphon pisum) - NEW MEXICO - Only an occasional very light infestation found in alfalfa in Dona Ana County. (N. M. Coop. Rpt.). OKLAHOMA - Light numbers found on Austrian winter peas in Garfield, Dewey and Blaine Counties. (Okla. Coop. Sur.). FLORIDA - Light in Hairy Peruvian alfalfa at Gainesville, Alachua County. (Mead).

GREENBUG (Schizaphis graminum) - NEW MEXICO - Generally light in small grains in Chaves County; 10-25 per linear foot. (N. M. Coop. Rpt.). OKLAHOMA - Generally noneconomic in northwestern counties checked. Except for 3 fields checked (2 in Garfield County and 1 in Grant County), counts averaged less than 5 per linear foot in Garfield, Grant, Alfalfa, Woods, Woodward, Ellis, Dewey, Blaine and Kingfisher Counties. (Okla. Coop. Sur.).

ENGLISH GRAIN APHID (Macrosiphum avenae) - OKLAHOMA - Light in small grains in northwest counties; ranged 0-8 per linear foot. (Okla. Coop. Sur.).

CORN LEAF APHID (Rhopalosiphum maidis) - NEW MEXICO - Occasional light, spotted infestations noted in small grain fields in Luna and Dona Ana Counties. (N. M. Coop. Rpt.). OKLAHOMA - Light counts of 2-10 per linear foot noted in Garfield, Grant and Kingfisher Counties. (Okla. Coop. Sur.).

APPLE GRAIN APHID (Rhopalosiphum fitchii) - OKLAHOMA - Light in all fields of small grain checked in northwest counties; ranged 0-10 per linear foot. (Okla. Coop. Sur.).

GRAIN APHIDS - OKLAHOMA - Large numbers of dead aphids of several species observed in numerous fields checked throughout northwest area indicate moderate numbers present before onset of near zero temperatures last weeks of December. (Okla. Coop. Sur.).

TARNISHED PLANT BUG (Lygus lineolaris) - FLORIDA - Total of 10 collected in 200 sweeps in Hairy Peruvian alfalfa at Gainesville, Alachua County. (Mead).

A PLANT BUG (Taylorilygus pallidulus) - FLORIDA - Four collected in 200 sweeps in Hairy Peruvian alfalfa at Gainesville, Alachua County. (Mead).

THREE-CORNERED ALFALFA HOPPER (Spissistilus festinus) - FLORIDA - Five taken in 200 sweeps of Hairy Peruvian alfalfa at Gainesville, Alachua County. (Mead).

ARMY CUTWORM (Chorizagrotis auxiliaris) - OKLAHOMA - First activity of season noted in scattered locations in small grain fields throughout northwest counties. Infestations observed in Alfalfa, Woods, Dewey, Blaine and Kingfisher Counties; largest numbers noted in Okeene area (up to 3 larvae per foot of row). This corresponds with first activity based on survey records since 1958. (Okla. Coop. Sur.).

GREEN CLOVERWORM (Plathypena scabra) - FLORIDA - In Hairy Peruvian alfalfa, 5 small to medium larvae taken in 200 sweeps at Gainesville, Alachua County. (Mead).

CLOVER LEAF WEEVIL (Hypera punctata) - OKLAHOMA - First activity of season noted on overwintering alfalfa in Okeene area, Blaine County; only small numbers present. (Okla. Coop. Sur.).

SPOTTED CUCUMBER BEETLE (Diabrotica undecimpunctata howardi) - FLORIDA - Total of 10 collected in 200 sweeps of Hairy Peruvian alfalfa at Gainesville, Alachua County. (Mead).

FRUIT INSECTS

PEACH TREE BORER (Sanninoidea exitiosa) - ALABAMA - Continues to feed; causing large amounts of gum at base of tree trunks on peach, plum and wild cherry in Lee, Macon, Montgomery and other central counties. Most noticeable on isolated peach and wild volunteer plum trees along ditchbanks and field fence lines. (McQueen).

ORANGE TORTRIX (Argyrotaenia citrana) - CALIFORNIA - Larvae light on lemon nursery stock in Oxnard, Ventura County. (Cal. Coop. Rpt.).

CITRUS THRIPS (Scirtothrips citri) - ARIZONA - Moderate numbers causing some bloom drop in home citrus trees in Pinal County. (Ariz. Coop. Sur.).

CITRUS RED MITE (Panonychus citri) - CALIFORNIA - Light on citrus leaves in San Rafael, Marin County. (Cal. Coop. Rpt.).

Citrus Insect Situation in Florida - End of December - CITRUS RUST MITE (Phyllocoptruta oleivora) on leaves infested 62 percent of groves (norm 67 percent); 47 percent economic (norm 45 percent). Citrus rust mite on fruit infested 44 percent of groves (norm 60 percent); 26 percent economic (norm 39 percent). Sharp decrease dropped leaf populations to average and fruit infestations to very low level. Further decrease expected to keep populations at low level through January. About 20 percent of groves will have heavy infestations. Highest districts Bartow, west coast and Brooksville. TEXAS CITRUS MITE (Eutetranychus banksi) infested 41 percent of groves (norm 33 percent); 18 percent economic (norm 10 percent). Decrease of past month will continue through January. Statewide population will be near average low level for January with only a few groves having important infestations. No districts expected to be in high range. CITRUS RED MITE (Panonychus citri) infested 45 percent of groves (norm 54 percent); 5 percent economic (norm 26 percent). Population dropped near the lowest level on record and will remain low in all districts. PURPLE SCALE (Lepidosaphes beckii) infested 83 percent of groves (norm 72 percent); 11 percent economic (norm 8 percent). GLOVER SCALE (L. gloverii) infested 64 percent of groves (norm 27 percent); 16 percent economic (norm 1 percent). CHAFF SCALE (Parlatoria pergandii) infested 73 percent of groves (norm 45 percent); 12 percent economic (norm 1 percent). YELLOW SCALE (Aonidiella citrina) infested 35 percent of groves (norm 11 percent); 6 percent economic (norm 1 percent). The above scale insects decreased but all continued above normal abundance. Little change expected. Only spotty and scattered infestations will be important. BLACK SCALE (Saissetia oleae) infested 33 percent of groves (norm 28 percent); 15 percent economic (norm 7 percent). Although infestations are unimportant at this time, number of overwintering scales is above average. FLORIDA RED SCALE (Chrysomphalus aonidum) infested 20 percent of groves (norm 57 percent); none economic (norm 10 percent). Now at lowest level on record and will continue very low. WHITEFLIES infested 79 percent of groves (norm 59 percent); 23 percent economic (norm 9 percent). Population of immatures is highest recorded for December in 12 years of record. Populations in this high range usually occur only in the summer months. Adult and egg forms have not been above average in recent months, indicating that conditions have been unusually favorable for the immatures which is the most destructive stage. (W. A. Simanton (Citrus Expt. Sta., Lake Alfred))

TRUCK CROP INSECTS

BEET ARMYWORM (Spodoptera exigua) - CALIFORNIA - Medium in onion planting in Chino, San Bernardino County. (Cal. Coop. Rpt.).

FALL ARMYWORM (Laphygma frugiperda) - ARIZONA - Counts of larvae in sugar beet fields of Maricopa County averaged 5 per 100 plants. (Ariz. Coop. Sur.).

BEAN LEAF ROLLER (*Urbanus proteus*) - FLORIDA - Severe on leaves and stems of some collard plants at Key West, Monroe County. (Buchanan, Dec. 12).

GREEN PEACH APHID (*Myzus persicae*) - ARIZONA - Increasing slowly in sugar beets and other host plants in Maricopa County. (Ariz. Coop. Sur.).

SEED-CORN MAGGOT (*Hylemya platura*) - CALIFORNIA - Probably this species, light in garlic plantings in Wheeler Ridge, Kern County. (Cal. Coop. Rpt.).

COTTON INSECTS

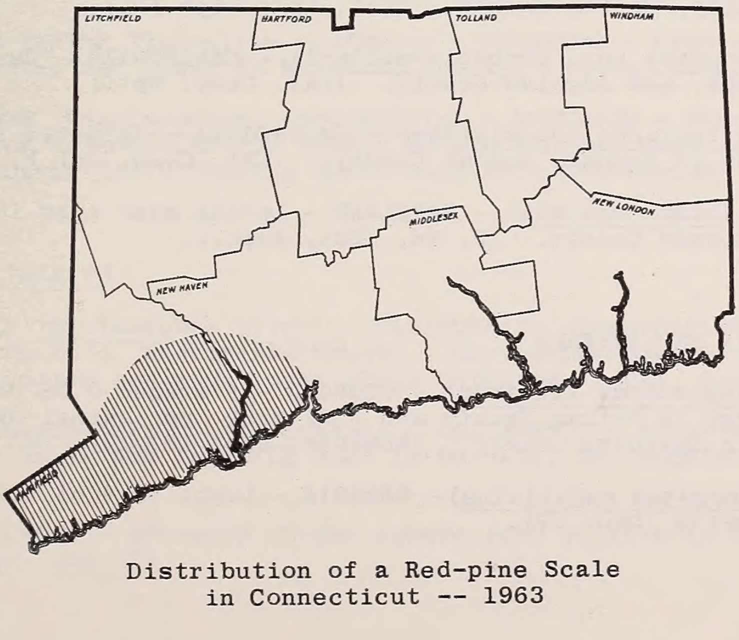
PINK BOLLWORM (*Pectinophora gossypiella*) - ARIZONA - New infestation found in Pinal County. (Ariz. Coop. Sur.).

BOLLWORM (*Heliothis zea*) - CALIFORNIA - Heavy in gin trash at Calipatria, Imperial County. (Cal. Coop. Rpt.).

AN EARWIG (*Labidura* sp.) - CALIFORNIA - Heavy in gin trash in Calipatria, Imperial County. (Cal. Coop. Rpt.).

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

A RED-PINE SCALE (*Matsucoccus resinosae*) - CONNECTICUT - This scale insect apparently spreading east and west at average rate of 5 miles in 3 years. Spread to north considerably less. General observations by operators of red pine plantations in infested area indicate that trees are dying at much lower rate than 5 years ago. Shaded area on accompanying map shows limits of known infestations as of November 1963, although not all trees within infested area are infested. Nurseries within infested area not allowed to grow red pine. (Turner).



Distribution of a Red-pine Scale
in Connecticut -- 1963

APHIDS - ALABAMA - *Aphis spiraecola* well established on *Spirea* spp. throughout Lee, Macon, Montgomery and other central counties; eggs and wingless forms present. Black eggs range few to hundreds per stem. These and other shrubs recently covered with ice for 36-48 hours, due to ice and snow storm. (McQueen). NEW MEXICO - *Cinara tujafilina* ranged light to heavy on arborvitae in Albuquerque, Bernalillo County; honeydew very noticeable on leaves and branches. (N. M. Coop. Rpt.). CALIFORNIA - *Myzus ornatus* nymphs and adults medium on leaves of *Lantana camara* in Santa Ana, Orange County. Eggs and adults of *Aphis gossypii* and *Macrosiphum rosae* medium on jacaranda tree nursery stock in Arlington, Riverside County. *Neomyzus circumflexus* heavy on mimulus and fuchsia nursery stock in Red Bluff, Tehama County. *Lachnus salignus* adults heavy on weeping willow in Riverside, Riverside County, and on willow in Fresno, Fresno County. Adults of *Neophyllaphis podocarpi* heavy on *Podocarpus macrophyllus* in South San Francisco, San Mateo County. (Cal. Coop. Rpt.).

CAMPHOR SCALE (*Pseudaonidia duplex*) - FLORIDA - Lightly damaged *Parkinsonia aculeata* at De Leon Springs, Volusia County, December 30. This is a new Florida Department of Plant Industry host record. (Roberts).

COCCIDS - CALIFORNIA - *Phenacoccus gossypii* light on *Lantana camara* in Costa Mesa, Orange County. *Aonidiella citrina* medium on euonymus nursery stock in Corning, Tehama County. *Lecanium cerasorum* medium on liquidamber trees in Sacramento, Sacramento County. (Cal. Coop. Rpt.). ALABAMA - *Fiorinia theae* light to extremely heavy on *Camellia japonica*, *C. sasanqua*, Burford holly and other ornamental hollies in Lee, Macon and Montgomery Counties; all stages, except eggs, present. Many isolated plants 10-60 percent defoliated, with many damaged leaves to fall before new growth begins. (McQueen). *Ceroplastes ceriferus* heavy on several holly shrubs, and *Neolecanium cornuparvum* light on few magnolias in Mobile area, Mobile County. (Eden). FLORIDA - *Lepidosaphes maskelli* severely damaged stem of *Juniperus* sp. at Forest City, Seminole County (Youtsey, Dec. 3), and moderately damaged leaves of *Juniperus* sp. at Tampa, Hillsborough County (Simmons, Dec. 30).

LANTANA SEED FLY (*Ophiomyia lantanae*) - CALIFORNIA - Medium in fruit of lantana in street plantings in Anaheim, Orange County. (Cal. Coop. Rpt.).

SOUTHERN RED MITE (*Oligonychus ilicis*) - CALIFORNIA - Heavy on leaves of pyracantha in Yuba City, Sutter County. (Cal. Coop. Rpt.).

A SPIDER MITE (*Oligonychus* sp., probably *milleri*) - CALIFORNIA - Heavy on *Pinus halpensis* in Claremont, Los Angeles County. (Cal. Coop. Rpt.).

AN ERIOPHYID MITE (*Trisetacus quadrisetus*) - CALIFORNIA - Infested large lot of juniper nursery stock in Sonoma, Sonoma County. (Cal. Coop. Rpt.).

SPOTTED GARDEN SLUG (*Limax maximus*) - MARYLAND - Laying many eggs in flower garden at Berwyn, Prince Georges County. (U. Md., Ent. Dept.).

INSECTS AFFECTING MAN AND ANIMALS

COMMON CATTLE GRUB (*Hypoderma lineatum*) - GEORGIA - Averaged 0.26 per animal in 110 Hereford yearlings in Putnam County and 0.21 grub per animal on 65 Hereford yearlings examined in Spalding County. (Roberts, Dec. 16, 17).

A CATTLE LOUSE (*Solenopotes capillatus*) - GEORGIA - Light on 4 of 110 animals in Putnam County. (Roberts, Dec. 17).

HOUSEHOLD AND STRUCTURAL INSECTS

COCKROACHES - UTAH - Supella supellectilium infesting home in Cache County. (Knowlton). Blattella germanica infesting restaurant at Logan, Cache County. (Hanson, Knowlton). PENNSYLVANIA - Blatta orientalis moderate in home at State College, Centre County. (Menusan, Jan. 6).

ALMOND MOTH (Cadra cautella) - ALABAMA - Causing nuisance; adults noted in homes in Houston and Coffee Counties. Larvae evidently feeding on vegetable and stored products in pantries and other storage facilities. (Ledbetter).

INDIAN-MEAL MOTH (Plodia interpunctella) - MARYLAND - Adults appeared in building at College Park, Prince Georges County. (U. Md., Ent. Dept., Jan. 6).

CIGARETTE BEETLE (Lasioderma serricorne) - ALABAMA - Heavy in 3 homes in Lee County; feeding on paprika, chili powder and dog biscuits, (Ledbetter, et al.).

BOXELDER BUG (Leptocoris trivittatus) - MARYLAND - Adults heavy and very annoying about property in Arbutis, Baltimore County. (U. Md., Ent. Dept., Jan. 2).

CLOVER MITE (Bryobia praetiosa) - NORTH CAROLINA - Noted in commercial laboratory in Wilson County. (Mount).

STORED-PRODUCT INSECTS

Stored-product Insects in Georgia - Lasioderma serricorne, Oryzaephilus surinamensis and Tribolium castaneum caused moderate damage to 2,000 pounds of tomato seed in Tift County. (Brightwell, Jan. 8).

GRANARY WEEVIL (Sitophilus granarius) - OKLAHOMA - Heavy; ranged 118-143 per quart of grain in farm storage wheat and barley in Marshall County. None found in bins treated before storage. (Okla. Coop. Sur.).

LESSER GRAIN BORER (Rhyzopertha dominica) - OKLAHOMA - Ranged 24-48 per quart of grain in farm stored barley and wheat in Marshall County. (Okla. Coop. Sur.).

CONFUSED FLOUR BEETLE (Tribolium confusum) - OKLAHOMA - Light; 5-10 per quart in farm stored barley and wheat in Marshall County. (Okla. Coop. Sur.).

POTATO TUBERWORM (Gnorimoschema operculella) - MICHIGAN - Blacklight trap collections from infested Monroe County potato storage show very low incidence of adults following daily fogging operations with pyrethrins. (Laser, Wells).

MISCELLANEOUS INSECTS

CITRUS WHITEFLY (Dialeurodes citri) - CALIFORNIA - Eradicative treatments continue in city of Sacramento, Sacramento County. Survey in adjacent areas to known infestation revealed one additional block infested. (Cal. Coop. Rpt.).

A COREID BUG (Leptocoris rubrolineatus) - CALIFORNIA - Heavy adult and nymph populations on maple and invading home in Burbank, Los Angeles County. (Cal. Coop. Rpt.).

MILLIPEDS - GEORGIA - Averaged 15 per square yard in lawn in Moultrie, Colquitt County. (Elder, Jan. 7).

CORRECTIONS

CEIR 14(1):7 - The Family Name of Aphids - Change reference in Bull. Zool. Nomen., vol. 20, pl. 5, to read: ...vol. 20, *pt*. 5.....

CEIR 14(2):19 - Afghanistan - Paragraph 2, line 7 - Delete reference to SWEETCLOVER APHID (*Therioaphis riehmi*).

CEIR 14(2):26 - First paragraph, next to last line - The SUDAN DURRA BUG (Agonoscelis versicolor) should read (Agonoscelis *pubescens*).

CEIR 14(2):27 - Ethiopia - First paragraph, line 7 - (Shistocerca gregaria) should read (S*c*histocerca gregaria). Lines 12 and 15 - (Lygaeus panduras) should read (Lygaeus pandur*us*).

LIGHT TRAP COLLECTIONS

	Tempera-ture °F.	Precipi-tation	Type of trap *	*Agrotis ipsilon* (black cutworm)	*Carpocapsa pomonella* (codling moth)	*Chorizagrotis auxiliaris* (army cutworm)	*Estigmene acrea* (salt-marsh caterpillar)	*Faronta diffusa* (wheat head armyworm)	*Feltia subterranea* (granulate cutworm)	*Heliothis virescens* (tobacco budworm)	*Heliothis zea* (bollworm, corn earworm)	*Laphygma frugiperda* (fall armyworm)	*Loxostege commixtalis* (alfalfa webworm)	*Loxostege similalis* (garden webworm)	*Loxostege sticticalis* (beet webworm)	*Ostrinia nubilalis* (European corn borer)	*Peridroma saucia* (variegated cutworm)	*Prodenia ornithogalli* (yellow-striped armyworm)	*Protoparce quinquemaculata* (tomato hornworm)	*Protoparce sexta* (tobacco hornworm)	*Pseudaletia unipuncta* (armyworm)	*Spodoptera exigua* (beet armyworm)	*Trichoplusia ni* (cabbage looper)	Major crop **
FLORIDA Gainesville 1/8			BL						1		1													
GEORGIA Tifton 12/26/63-1/8/64			BL							0	0								0	0				
SOUTH CAROLINA Charleston 12/30/63-1/5/64	29-62	1.44	BL	3			0		0		0	1					0	0	0	0	0		0	

* BL = blacklight; I = incandescent; MV = mercury vapor ; O = other

** alf. = alfalfa; beet = garden beet and/or sugar beet; cole = cole crops (crucifers); cott. = cotton; FC = field corn; grain = small grains; leg. = legumes (unspecified); lett. = lettuce; pean. = peanut; pepp. pepper; pot. = potatoes; SC = sweet corn; sol. = solanaceous plants (unspecified); soy. = soybean; TC = truck crops (unspecified or mixed); tob. = tobacco; tom. = tomato.

INTERCEPTIONS OF SPECIAL INTEREST AT U.S. PORTS OF ENTRY

Some important interceptions that were reported by the Plant Quarantine Division, ARS, USDA, on October 31, 1963, follow. These reports are based on identifications received from Federal taxonomists at the U.S. National Museum during the month, and include any of special interest from recent months that were not previously reported.

A GIANT AFRICAN SNAIL (*Achatina fulica* (Bowdich)) in air baggage in passenger's cosmetic case at *Honolulu International* Airport, Hawaii.

LEEK MOTH (*Acrolepia assectella* (Zell.)) in ship's stores at Wilmington, North Carolina.

MEXICAN FRUIT FLY (*Anastrepha ludens* (Loew)) in pomegranate in air baggage at San Pedro, California.

MEDITERRANEAN FRUIT FLY (*Ceratitis capitata* (Wied.)) one time each in coffee berries in air baggage and airmail from Hawaii; in ship's stores at Philadelphia, Pennsylvania, and in coffee berries at San Pedro, California.

AN AVOCADO SEED WEEVIL (*Conotrachelus perseae* Barber) (a Mexican and Central American species) in baggage at Laredo, Texas.

CABBAGE MOTH (*Mamestra brassicae* (L.)) 10 times in stores; 8 times at New York, New York; 1 time each at Mobile Alabama, and San Juan, Puerto Rico.

AN OLETHREUTID MOTH (*Matsumuraeses phaseoli* (Mats.)) in string beans at Seattle, Washington.

A LEAF MINER FLY (*Phytomyza* sp., probably *rufipes* Mg.) 5 times in stores; 1 time each at Baltimore, Maryland; Corpus Christi, Texas; and Norfolk, Virginia; and 2 times at Galveston, Texas.

A STENOMID MOTH (*Stenoma catenifer* (Wlsm.)) 11 times in baggage; 5 times at Miami, Florida; once each at Houston and Laredo, Texas; once each at New York, New York, and Charleston, South Carolina; and once each in stores at Galveston, Texas, and Philadelphia, Pennsylvania.

KHAPRA BEETLE (*Trogoderma granarium* Everts) 8 times (5 times in ships' stores, 1 time in ship's hold and 2 times contaminating cargoes of guar gum and celery seed sacks); 3 times at San Pedro, California; 2 times at Cleveland, Ohio; and one time each at Wilmington, North Carolina; Philadelphia, Pennsylvania; and New York, New York.

GOLDEN NEMATODE (*Heterodera rostochiensis* Woll.) 18 times; 5 times in New York, New York; 3 times in Chicago, Illinois; 2 times each at New York International Airport, New York, and Honolulu, Hawaii; and one time each at Hoboken, New Jersey; Norfolk, Virginia; Boston, Massachusetts; San Diego, California; and Jacksonville and Fort Lauderdale, Florida.

STATUS OF THE EUROPEAN CORN BORER IN 1963[1]

Introduction: Cooperating agricultural agencies in 16 States reported on surveys conducted in their States to determine the abundance and distribution of European corn borer (Ostrinia nubilalis (Hübner)) in 1963. All survey data, summaries or records of field observations were submitted to Survey and Detection Operations in Hyattsville, Maryland, for final processing. Personnel of Entomology Research Division, Agricultural Research Service, kindly reviewed the material after it was compiled.

The 1963 European corn borer survey was conducted during the late summer and fall of the year. The survey is designed to measure the fall population of European corn borer larvae. The participating States were encouraged to time the surveys to include a high percentage of late instars whenever possible. In all cases, except for some minor differences in compiling data, the accepted survey methods were used. The survey was continued on a district basis whenever possible in 1963. A district is usually a group of counties within a State, in most cases based on Crop Reporting Districts.

New Distribution: Twenty-five counties were reported infested for the first time in 1963 according to ARS records, but all of the new counties were found in known infested States. It was a considerable increase from the last four years; only 4 new counties were reported in 1962, 15 in 1961, 6 in 1960 and 13 in 1959.

The new counties reported infested in 1963 were as follows: North Carolina - Caswell, Person, Forsyth, Guilford, Davidson, Randolph, Harnett, Anson and Robeson; South Carolina - Lancaster, Kershaw, Sumter, Lee, Chesterfield, Darlington, Marlboro, Florence, Dillon, Marion and Horry; Georgia - Warren, Peach, Houston and Macon; Kansas - Seward.

Special surveys were conducted during the fall in New Mexico, but no European corn borers were found.

Abundance: Fall counts of European corn borer larvae in the North Central States were generally about the same as those in 1962 on the average. The number of borers per 100 plants averaged 113 in 1963 compared to 99 in 1962. However, substantial increases in population were noted in northwestern Iowa and in southeastern North Dakota, and rather high levels were again recorded in several Nebraska districts. Population levels in Illinois were highest in the northwest, northeast and west districts, but counts over the State were about the same as in 1962. A general decrease was noted in South Dakota, except for the southeast district, where the borer was only slightly reduced in number. In Minnesota, counts were highest in the west central district, similar to those that occurred last fall. On the average, counts in Minnesota were up a little from 1962. Population levels in the other North Central States continued low, with the exception of those in the southeast district (District IX) of Missouri where they were still somewhat high. The thirteen districts in the North Central States where counts were 200 or more borers per 100 plants were as follows: Illinois - northwest (207); Iowa - District I (279), District II (227), District V (263); Minnesota - west central (200); Missouri - southeast (223); Nebraska - north (201), northeast (320), central (233), east (268), south (218); North Dakota - southeast (391); South Dakota - southeast (260).

In the Eastern States, population levels continued at a relatively low level. Borers per 100 plants averaged 77 in Delaware, 74 in Maryland and 76 in New Jersey. In Arkansas, European corn borer populations were lower than in the fall of 1962. This was due, in part, to the fact that there was a smaller percentage of corn planted in June and July than there was in 1962 and past years.

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[1] Survey data provided by State agricultural agencies. Data compiled and summarized by Survey and Detection Operations, Plant Pest Control Division, Agricultural Research Service, United States Department of Agriculture.

Table 1 - Summary by States of European Corn Borer Abundance in Corn, Fall of 1963, Compared with Data for 1962

State	1962			1963			Comparable Districts or Counties Surveyed Both Years		
	No. of Districts Surveyed	Average No. of Borers Per 100 Plants	No. of Counties Surveyed	No. of Districts Surveyed	Average No. of Borers Per 100 Plants	No. of Counties Surveyed	Number	Borers per 100 Plants 1962	Borers per 100 Plants 1963
Eastern									
Delaware	1	68	3	1	77	3	1	68	77
Maryland	3	59	21	3	74	21	3	59	74
Total	4		24	4		24			
Average 1/								63	176
North Central									
Illinois	7	96	39	7	95	35	7	96	95
Indiana	12	29	92	12	36	92	12	29	36
Iowa	12	88	99	12	160	99	12	88	160
Kansas	3	43	25	3	43	25	3	43	43
Minnesota	7	67	69	7	90	71	7	67	90
Missouri	8	72	37	7	76	33	7	77	76
Nebraska	7	201	72	7	206	72	7	201	206
North Dakota	1	285	5	1	391	5	1	285	391
Ohio	5	23	33	5	15	33	5	23	15
South Dakota	6	160 2/	44	6	107 2/	45	6	160	107
Wisconsin	9	17	58	9	21	58	9	17	21
Total	77		573	76		568			
Average 1/								99	113
Southern									
Arkansas	4	24	19	4	13	21	4	24	13
Other States									
Michigan	1	49	9	1	26	18			
New Jersey				1	76	12			

1/ Weighted averages based on districts surveyed

2/ Average based on 39 counties

Table 2 - European Corn Borer Abundance in Corn,
Fall of 1963, Compared with Data for 1962

State (Districts or Counties)	Average Number of Borers Per 100 Plants	
	1962	1963
Arkansas (Ark. Ins. Sur.)		
Northwest	20	10
North Central	11	11
Northeast	44	12
East Central	21	19
Average	24	13
Delaware (Agr. Expt. Sta.)		
Kent	77	94
New Castle	51	66
Sussex	76	72
Average	68	77
Illinois (Natural History Survey, Ext. Ser.)		
Northwest	150	207
Northeast	64	116
West	149	150
Central	100	89
East	97	50
West-southwest	65	27
East-southeast	49	23
Average	96	95
	(101)1/	(106)1/
Indiana (Ext. Ser., Expt. Sta.)		
North-northwest	89	72
North-northcentral	28	46
North-northeast	14	46
Northwest	32	18
North Central	16	14
Northeast	21	16
Southwest	32	50
South Central	24	18
Southeast	27	16
South-southwest	30	62
South-southcentral	30	39
South-southeast	7	32
Average	29	36

State (Districts or Counties)	Average Number of Borers Per 100 Plants	
	1962	1963
Iowa (State Dept. of Agr.; Ext. Ser.; Ent. Dept., Iowa State Univ; ENT, ARS, USDA)		
District I	100	279
District II	104	227
District III	25	54
District IV	141	185
District V	112	263
District VI	41	86
District VII	91	181
District VIII	86	73
District IX	76	179
District X	25	119
District XI	127	106
District XII	126	168
Average	88	160
Kansas (Ins. Sur.)		
Northeast	45	23
North Central	9	84
East Central	74	21
Average	43	43
Maryland (Agr. Ext. Ser., Ins. Sur.)		
Eastern Shore	64	94
Southern area	58	56
Western and Central areas	54	71
Average	59	74
Michigan (Ins. Sur.)		
Surveyed Counties	49	26
(Survey in 1962 conducted in 9 counties; survey in 1963 conducted in 18 counties)		

1/ Average based on 35 counties rather than districts

Table 2 - (Continued)

State (Districts or Counties)	Average Number of Borers Per 100 Plants	
	1962	1963
Minnesota (State Dept. of Agr.)		
Northwest	90	59
West Central	184	200
Central	30	57
East Central	17	25
Southwest	92	117
South Central	34	132
Southeast	20	42
Average	67	90
Missouri (Ext. Ser., Ins. Sur.)		
District I	59	93
District II	47	68
District III	32	46
District IV	30	18
District V	43	72
District VI	65	9
District VII	35	
District IX	263	223
Average	72	76
Average comparable districts (7)	77	76
Nebraska (Agr. Expt. Sta., Ext. Ser., Ins. Sur.).		
North	182	201
Northeast	294	320
Central	284	233
East	280	268
South	248	218
Southeast	105	169
Southwest	16	35
Average	201	206
New Jersey (Coop. Econ. Ins. Sur.)		
Sussex		9
Warren		8
Hunterdon		89

State (Districts or Counties)	Average Number of Borers Per 100 Plants	
	1962	1963
New Jersey (Continued)		
Somerset		51
Middlesex		66
Monmouth		64
Mercer		112
Burlington		107
Camden		89
Gloucester		164
Salem		97
Cumberland		58
Average		76
	(111)1/	(79)1/
North Dakota (State Dept. of Agr.)		
Southeast	285	391
Ohio (Expt. Sta.; Ext. Ser.; ARS, USDA)		
Northwest	43	36
West Central	16	14
Central	2	7
Southwest	28	9
Northeast	25	8
Average	23	15
	(26)2/	(20)2/
South Dakota (Agr. Expt. Sta., Ext. Ser.)		
North Central	76	52
Northeast	172	75
Central	162	64
East Central	207	118
Southeast	294	260
South Central	51	72
Average	160 3/	107 3/

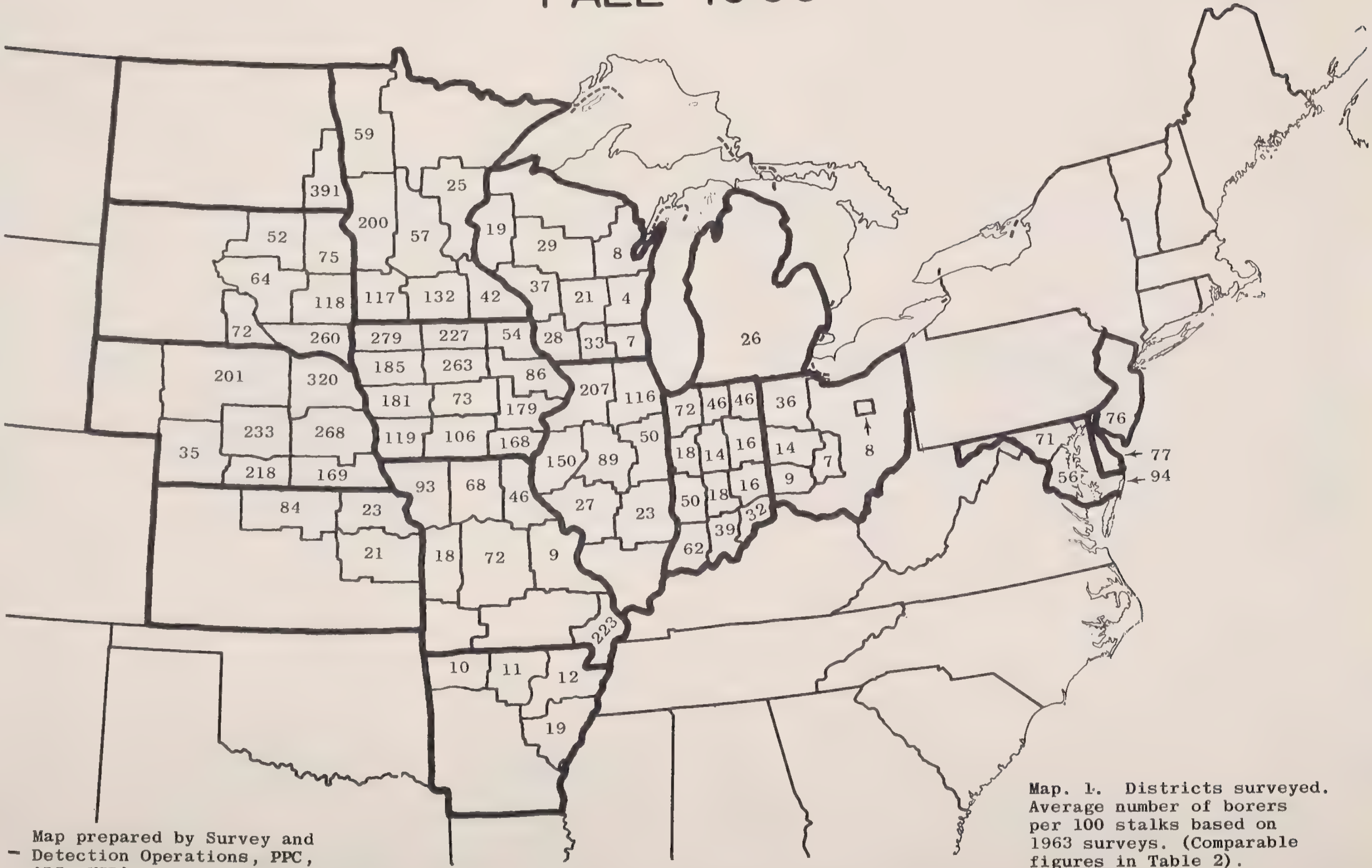
1/ Average based on all samples rather than county average
2/ Average based on all samples rather than district average
3/ Average based on 39 counties

Table 2 - (Continued)

State (Districts or Counties)	Average Number of Borers Per 100 Plants	
	1962	1963
Wisconsin (State Dept. of Agr.)		
Northwest	35	19
North Central	6	29
West Central	27	37
Central	6	21
Southwest	32	28
South Central	24	33
Southeast	5	7
East Central	8	4
Northeast	11	8
Average	17	21

EUROPEAN CORN BORER ABUNDANCE

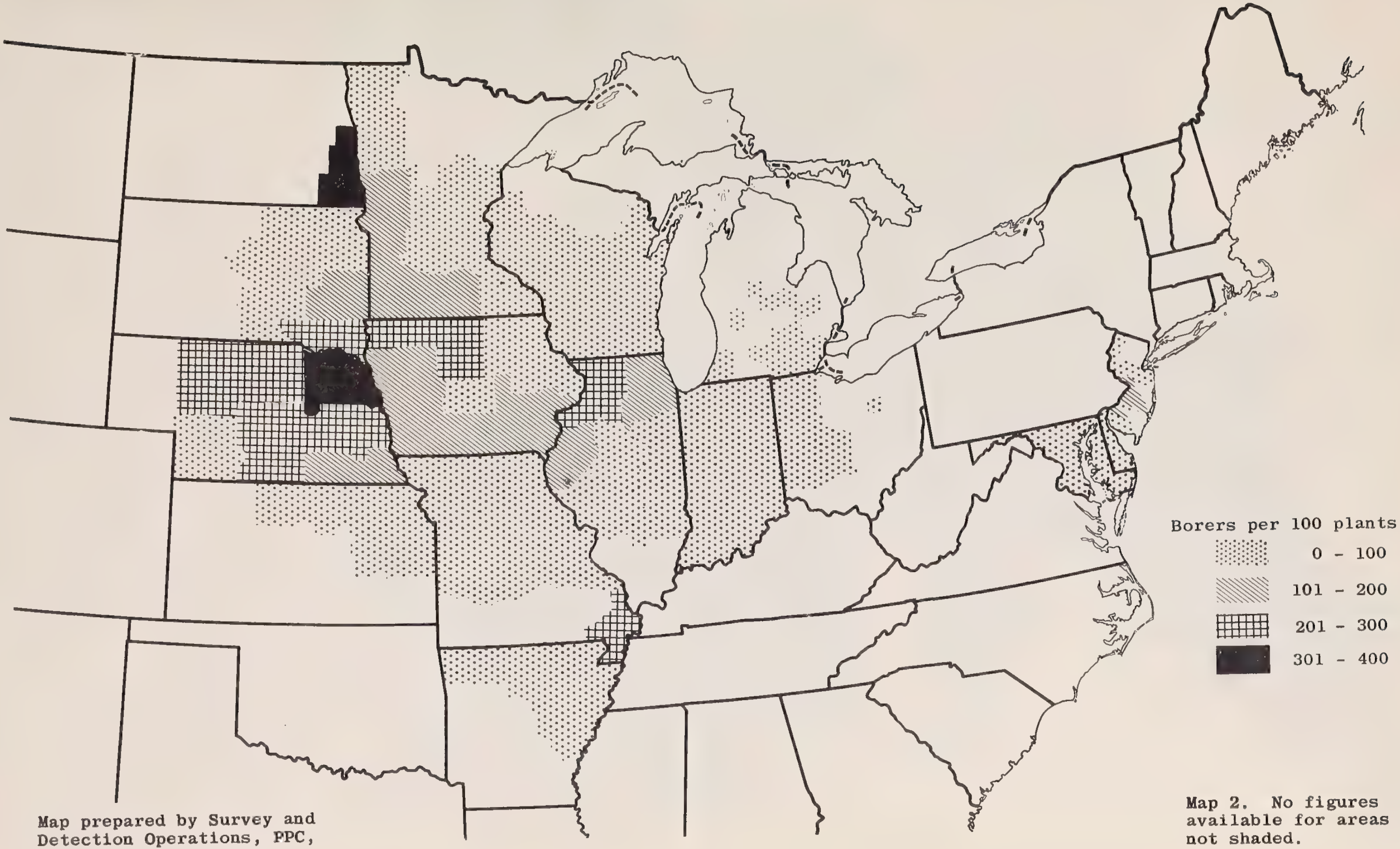
FALL 1963



Map prepared by Survey and Detection Operations, PPC, ARS, USDA, January 1964

Map. 1. Districts surveyed. Average number of borers per 100 stalks based on 1963 surveys. (Comparable figures in Table 2).

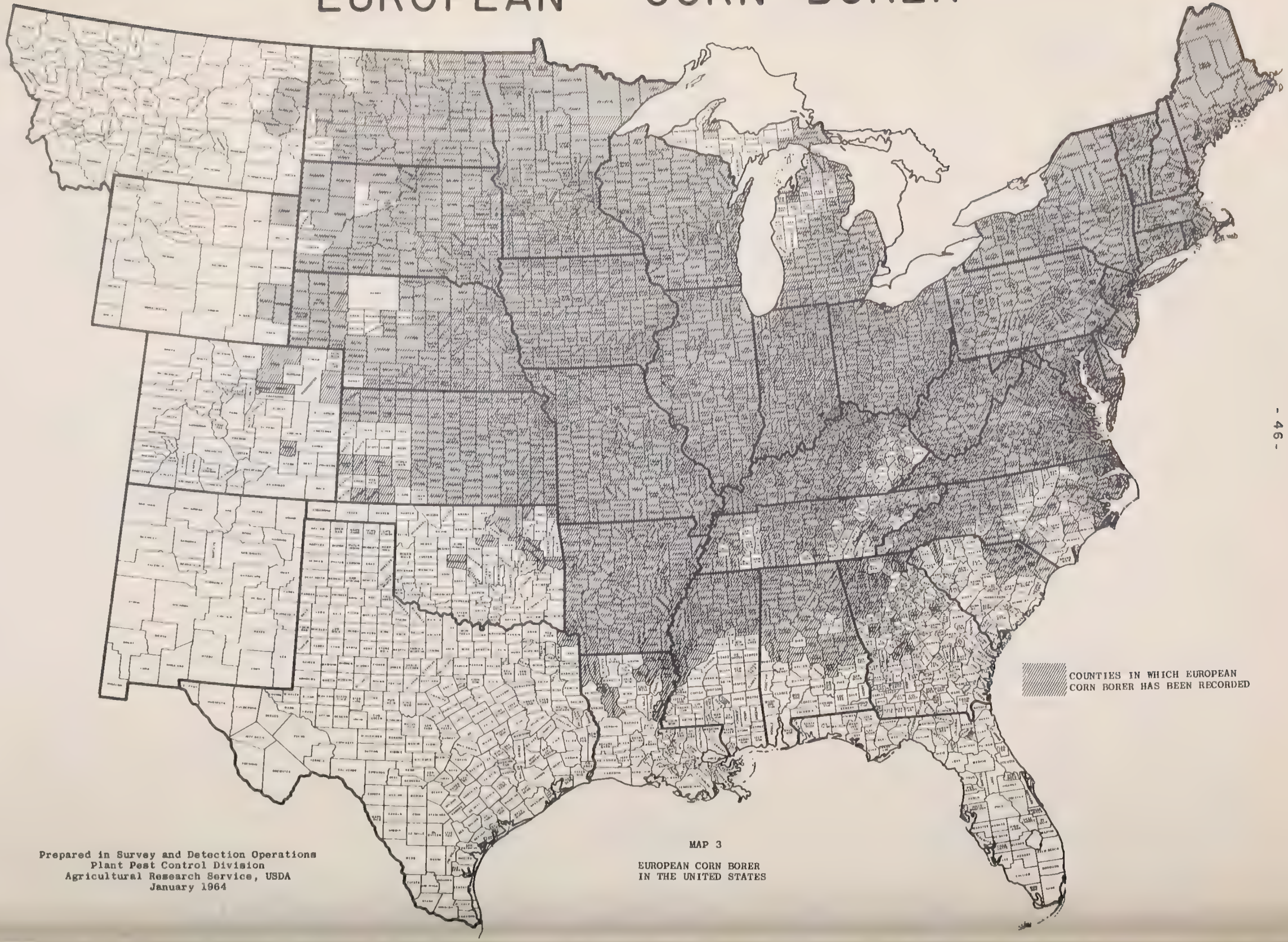
EUROPEAN CORN BORER ABUNDANCE
FALL 1963



Map prepared by Survey and
Detection Operations, PPC,
ARS, USDA, January 1964.

Map 2. No figures
available for areas
not shaded.

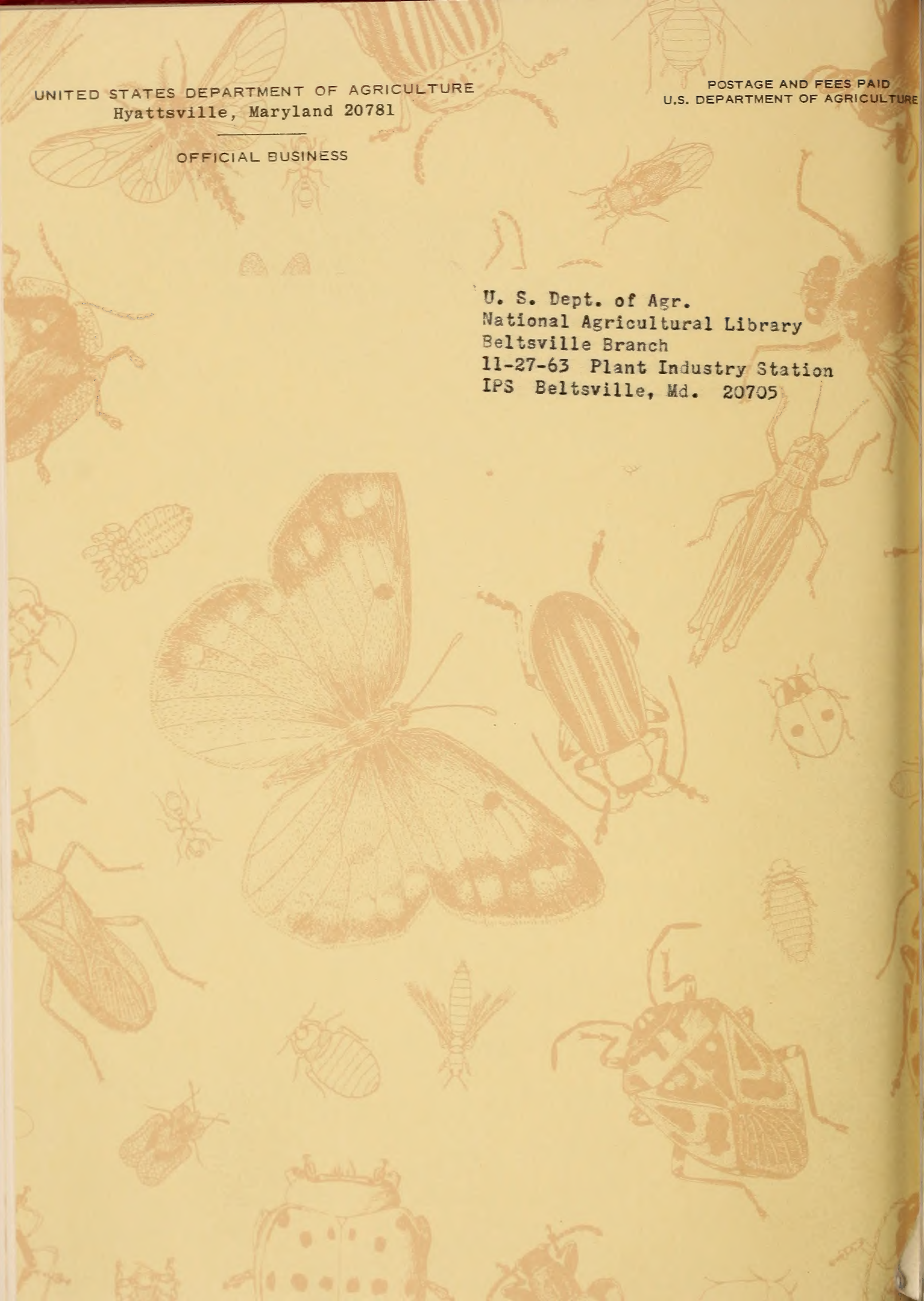
EUROPEAN CORN BORER



MAP 3

EUROPEAN CORN BORER
IN THE UNITED STATES

Prepared in Survey and Detection Operations
Plant Pest Control Division
Agricultural Research Service, USDA
January 1964



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